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ABSTRACT

This report summarizes evaluation information on reading, writing, and mathematics achievement among elementary and secondary school students in 310 school districts in Massachusetts, after the second year of implementation of the Basic Skills Improvement Policy. The report describes data collection, analysis, and reporting procedures, summarizes major findings for 1981-82, and compares them with findings from 1980-81. The results indicate that: (1) for both 1980-81 and 1981-82, about 90 percent of students evaluated met local minimum standards, achievement was greatest at the lowest elementary level, females performed better than males in all skill areas, and whites had higher achievement levels than minority students; (2) a decrease in the percentage of blacks who met minimum standards between the two evaluation periods increased the gap between white and black achievement; (3) the percentage of students who met minimum standards was generally highest in residential suburbs and the wealthiest communities and lowest in big cities and the poorest communities; and (4) per pupil instructional expenditures did not influence student achievement significantly. Several tables of data are presented in the report. (Author/MJL)

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BASIC SKILLS IMPROVEMENT POLICY

1981-82 Statewide Summary of Student Achievement of Minimum Standards in the Basic Skills of Reading, Writing, and Mathematics

SECOND ANNUAL REPORT

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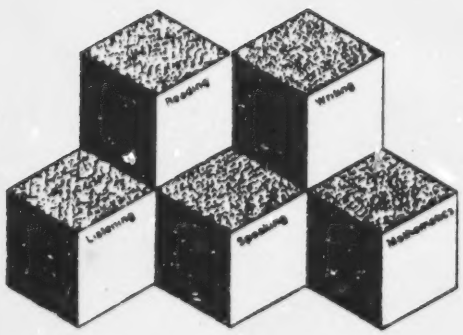

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BASIC SKILLS IMPROVEMENT POLICY

1981-82 Statewide Summary of Student Achievement of Minimum Standards in the Basic Skills of Reading, Writing, and Mathematics

Bureau of Research and Assessment
Department of Education
1385 Hancock Street
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February, 1983

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EXECUTIVE SUMMARY

Background

The 1981/82 Statewide Summary of Student Achievement of Minimum Standards in the Basic Skills of Reading, Writing and Mathematics summarizes the evaluation information submitted by 310 school districts for the second year of the implementation of the Basic Skills Improvement Policy. Information is reported for over 217,000 elementary and secondary students of whom about 201,000 were tested in reading, writing and mathematics.

The first part of the Summary reviews the information collected, the analysis and reporting procedures, and the cautions to be noted in interpreting this information. The main body of the report summarizes the major findings for 1981/82. The concluding section is a summary analysis for both 1980/81 and 1981/82.

1981/82 Highlights

Overall, about 90% of all students evaluated met local minimum standards. Achievement of standards was highest at the early elementary level (K-3) where 93% met standards in mathematics, 92% in reading and 91% in writing. Achievement was lowest at the secondary level (7-12) where 89% met standards in reading and 88% met standards in writing and mathematics. At the later elementary level (4-6) 91% met standards in reading and writing; 90% met standards in mathematics.

In all skill areas at both elementary and secondary levels females outperformed males. The differences were greatest in writing and least in mathematics.

In almost every skill area at both elementary and secondary levels higher percentages of White students achieved local standards than Black, Hispanic or Other students. The differences were most pronounced in secondary reading and least in early elementary writing. While overall, 1 out of 10 students did not meet local standards in one or more of the basic skills, for Black and Hispanic students the overall ratio was more than 2 out of every 10 students.

Of the total students reported statewide, about 92% were evaluated across all skills and grade levels. Of the 8% exempted or not evaluated, about half were special education exemptions.

At the early and later elementary levels most districts evaluated using either a locally developed test or one of five well-known commercial tests. At the secondary level, about 79% of school systems used one or more of the state's reading, writing or mathematics tests. At the early elementary level about 8 out of 10 districts conducted their initial evaluations at third grade; at the later elementary level about 5 out of ten selected the fifth grade for the initial evaluation (only slightly less selected the sixth grade), and at the secondary level about 6 out of 10 districts selected the eighth grade for their initial evaluation.

Local districts' minimum standards in reading and mathematics were reported as percentage passing scores. The average (mean) statewide standard for early elementary reading was 57% correct, for mathematics 56%. For later elementary reading the average standard was 54%, for mathematics 53%. For

secondary reading the standard was 59%, for mathematics 56%. Since writing in most instances was evaluated through writing samples, standards in this skill are reported in the Summary by the number and percentage of districts setting standards at specified scoring points.

1980/81 - 1981/82 Comparisons

Overall, about 90% of all students evaluated met local minimum standards during both years. The percentages across skills and grade levels ranged from 86% to 93% in 1980/81 and 88% to 93% in 1981/82. For both years reading was the skill with the largest percentage of students achieving minimum standards, and writing was the skill with the smallest percentage of students achieving minimum standards. Early elementary was the grade level, during both years, in which the greatest percentage of students met standards; secondary was the level in which the smallest percentage met standards.

Across all grade levels and skills, for the two year period, females out-performed males. The differences between the two sexes were largest at the secondary level and, across all levels, in writing.

The percentage of White students meeting minimum standards was not only larger than the percentage of Black and Hispanics for both years but the gap between White and Black students was wider in 1981/82 than in 1980/81. The percentage of Black students meeting minimum standards decreased, in all except two cases, between 1980/81 and 1981/82. The percentage of Hispanic students meeting standards showed generally offsetting increases and decreases between the two years. In addition, compared to their proportions of those reported, Black and Hispanic students were disproportionately represented among students who were either exempted from testing or not evaluated.

The Summary classifies Massachusetts cities and towns into four kinds of communities: big cities, industrial suburbs, residential suburbs, and small towns and other communities. Across all grade levels and skills, for both years, the percentage of students achieving minimum standards was highest, in most comparisons, in residential suburbs and lowest in all comparisons in big cities. In most cases the differences between the two types of communities were larger in 1981/82 than in 1980/81. The differences in student achievement between big cities and residential suburbs were statistically significant and, in most cases, statistically significant between big cities and industrial suburbs as well as small towns and other communities.

An examination of the relationship between community wealth or fiscal ability and how well students achieved minimum standards was undertaken. Across all grade levels and skills, for most comparisons, the percentage of students meeting minimum standards was highest in the wealthiest communities. In all comparisons percentage achievement was least in the poorest communities. The differences in student achievement between the wealthiest and poorest communities were statistically significant. A related examination of the relationship between per-pupil instructional expenditures and student achievement of minimum standards showed no significant differences.

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SECTION 1 - INTRODUCTION

A. Background

This report provides a statewide statistical summary and analysis of the data submitted by local school districts in Massachusetts on the "1981-82 Annual Report on Basic Skills Improvement Programs." All public school districts were required to submit this report to the Massachusetts Department of Education under Section 40.09 of the Regulations for Implementation of the Policy on Basic Skills Improvement. This section requires districts to annually report:

> "...the number and percentage of students by race, sex, and linguistic minority who have and have not achieved the minimum standards established by the public school district for the early elementary, later elementary, and secondary levels."

These Regulations were promulgated by the State Board of Education on January 23, 1979, after the Board had adopted the Policy on Basic Skills Improvement on August 29, 1978.

Under the Policy and Regulations, school districts were required to develop basic skills improvement program plans for the skills of reading, writing, and mathematics by August 1, 1980, for three grade levels - early elementary (K-3), later elementary (4-6), and secondary (7-12). At all grade levels, these program plans contained the following components:

1) a description of how administrators, teachers, parents, employers, students (at the secondary level only), and the general public participated in the development of the plan;

2) the basic skills objectives and level of achievement (minimum standards) for reading, writing, and mathematics;

3) the instruments selected to evaluate student achievement of minimum standards;

4) the grade level for evaluating students;

5) a description of how the public will receive information on the plan; and

6) a description of the follow-up instructional programs and services to be provided students not achieving minimum standards.

School districts were required to start implementing these program plans during the 1980-81 school year. At the end of the 1980-81 and 1981-82 school years, school districts reported (along with other data) the following information on their program results at each grade level and for each skill (reading, writing, and mathematics):

1. the grade level in which students were evaluated;
2. the evaluation instrument or instruments which were administered;
3. a description of the minimum standard used to detemine if students achieved basic skills;
4. the number of students evaluated who achieved and did not achieve minimum standards;
5. the number of female and male students evaluated who achieved and did not achieve minimum standards;
6. the number of students evaluated who by race/ethnicity reporting categories achieved and did not achieve minimum standards; and
7. the number of students exempted from the program or not evaluated during the school year, including the number of students exempted or not evaluated by sex and race/ethnicity reporting categories.

The data reported by every public school district in Massachusetts were coded and keypunched onto a computer file by the Massachusetts Department of Education. A number of special computer programs were then written to provide statewide statistical summaries of the individual school district data. This report displays and analyzes statewide data that should be of most interest to the State Board of Education, Department of Education staff, School Committee members, local school district staff, and the general public.[1] Readers interested in information from the 1981-82 Annual Reports that is not available in this report, particularly data from individual school districts, should contact the Department of Education's Regional Education Center that services their community.

B. Description of Data Reporting and Analysis Procedures

The specific data elements reported by school districts on their "1981-82 Annual Reports on Basic Skills Improvement Programs" and the procedures used to code, analyze and report these data were as follows:

1. Grade Level and Skill - Districts reported their basic skills results at three grade levels. These grade levels were early elementary (grades K-3), later elementary (grades 4-6), and secondary (grades 7-12). Within each grade level, districts reported the same type of results for the skills of reading, writing, and mathematics. There were thus nine similar data bases that were available for this report (results for early elementary reading, early elementary writing, early elementary mathematics, later elementary reading, later elementary writing, later elementary mathematics, secondary reading, secondary writing, and secondary mathematics). Most of the data in this report is organized by grade level and skill. For most of the data (such as the percentage of students statewide achieving minimum standards), there are nine sets of statewide figures (one set of statistics for each grade level and skill).

1 1980-81 statewide information was reported in a Department of Education publication entitled 1980-81 Statewide Summary of Student Achievement of Minimum Standards in the Basic Skills of Reading, Writing and Mathematics (December, 1981) and is available at the various regional education centers of the Department.

2. Grade - Within each grade level, districts were only required to evaluate students at one grade. On their Annual Reports, districts indicated which grade within each level was the one in which students were evaluated. At the early elementary level, schools evaluated students in either grade 1, 2, or 3. At the later elementary level, schools evaluated students in either grade 4, 5, or 6. At the secondary level, schools evaluated students in either grade 7, 8, or 9. Data on the number of districts which reported students at each grade are displayed in Section VII of this document.

3. Evaluation Instrument - For each grade level and skill, districts were required to report the name of the evaluation instrument or instruments they administered to evaluate students for the achievement of minimum standards. They also indicated the publisher of the instrument, subtests used, and copyright date. A code number was assigned to each instrument. The number of times each code number appeared in the file was computed. These figures were used to develop the data on evaluation instruments discussed in Section V of this report. Some districts administered more than one instrument at a particular grade level and skill. Because of column limitations in the computer data field, only one of the instruments could be entered into the file. Districts using more than one instrument were asked by the Department of Education which instrument should be coded.

4. Minimum Standard - For each grade level and skill, districts reported the minimum score (or other indicator of performance) on the evaluation instrument that students had to obtain in order to be reported as achieving standards. The minimum standard was reported differently in reading and mathematics than in writing.

   a. In reading and mathematics, the minimum standard was reported as either the percentage of test items students had to answer correctly or the number of test items students had to answer correctly of the total number of items on the test. All standards reported with the latter information were converted to a percentage correct. All minimum standards were thus coded as the percentage of items students had to answer correctly on the test.

      In some districts, it was not possible to convert the standard to a percentage correct. In these cases, the minimum standard was coded as NK (not keypunched). For districts that administered more than one test for a particular grade level/skill, only the standard for the test coded in the evaluation instrument column was keypunched. Finally, some districts established a minimum standard for different sections (e.g.,

subtests) of a test battery. Because of the column limitations in the data field, the minimum standards on each of the subtests could not be coded. For districts that set standards on different subtests, the standard was reported as the percentage of items a student had to answer correctly on the total test.

b. For writing, school districts administered either an objective-item test and/or a writing sample(s). When districts administered only an objective-item test, the writing standard was coded and is reported on the printouts as a two digit number. This number is the percentage of items on the test students had to answer correctly. This two digit number is equivalent to the type of standard coded for reading and mathematics.

Districts which administered writing samples usually scored these samples using either the holistic or analytic methods. [1] Most districts using the holistic method of scoring writing samples had two people rate each writing sample on a scale of 1 to 4 (with 1 the lowest score assigned to a paper and 4 the highest score). The total score on a paper rated in this manner thus rangec from 2 to 8. When two writing samples were administered, the scores on both samples were either totaled so that the students' scores could range from 4 to 16 (a scale of 2-8 on both samples) or the scores on both samples were averaged and reported on the 2-8 scale. Some districts used a variation of this holistic scoring method (e.g., rating on a 5 point rather than a 4 point scale, using three raters rather than two raters). Standards established using holistic scoring are reported as the minimum score students had to receive in order to be reported as achieving standards followed by a slash (/) and the total possible score students could receive.

Districts using the analytic scoring method reported standards as numbers which were either comparable to an objective - test item score or a holistic score. These standards were coded and are reported on the printout on the basis of what school districts reported.

If districts administered both an objective-item test and a writing sample(s) at a particular grade level, only the standard on the writing sample(s) was coded and reported on the printouts because of column limitations in the data field.

In some cases the standards reported by school districts could not be converted into a percentage correct or holistic score. When this situation occurred the standard was coded and reported as NK (not keypunched).

1. See Basic Skills Improvement Policy Implementation Guide #2 (Revised Edition): Writing Assessment Manual for a detailed discussion of these methods of scoring writing samples.

The statistics on minimum standards displayed in Section VI of this report were computed using the codes assigned to each local district's standards.

5. Students Evaluated for Achievement of Minimum Standards - For each skill and grade level, districts reported the number of students evaluated for achievement of minimum standards. For the students they evaluated, districts reported the number who achieved minimum standards and the number who did not achieve minimum standards. Districts also reported this information by the sex and race/ethnicity of students. The categories used for reporting by race/ethnicity are as follows:

a) Black (not of Hispanic origin): A person having origins in any of the Black racial groups of Africa, except those under Hispanic.

b) Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin - regardless of race.

c) White (not of Hispanic Origin): A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

d) Other: This category includes persons of American or Alaskan Native heritage and persons of Asian or Pacific Islander heritage. An American Indian or Alaskan Native is a person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition. An Asian or Pacific Islander is a person having origins in any of the original peoples of the Far East, Southeast Asia, the Pacific Islands, or the Indian subcontinent. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa. These categories are the same as those required in all state and federal reports.

The number of students reported by individual school districts as achieving minimum standards was totaled for each grade level and skill. These statewide figures on the number of students who achieved and who did not achieve the minimum standards established by local communities are displayed in Sections II - IV of this report.

Note: Portuguese and Cape Verdean students were not considered Hispanic. They were reported in either the Black or White categories.

6. Students Exempted/Not Evaluated - For each grade level and skill, districts also reported the number of students who were exempted from the basic skills improvement program or who were not evaluated during 1981-82. There were three categories of students who were exempted or not evaluated. These categories were - Special Education exemption, Limited English Ability exemption, and Other.[1] This data was also reported by the sex and race/ethnicity of the students. Statewide figures on the number of students exempted/not evaluated are displayed in Section II - IV of this report.

7. Data Reporting - Districts were required to report the number of students meeting and not meeting standards and the number exempted or not evaluated. This data were also reported by the sex and race/ethnicity of the students. In some cases there were omissions or discrepancies in the sex and race/ethnicity data such that these number totals did not add up to the overall number totals. While efforts were made to correct these, it was not possible to do so in all instances. Therefore, in several tables the sex and/or race/ethnicity number totals may not add up to the overall number totals in particular rows or columns.

   Related to this, the reader will note that in some tables percentage figures may not add up to 100% due to rounding. This is footnoted for the appropriate tables.

   Finally, it should be noted that in some tables district totals may vary slightly from those in other tables. Generally, this is because of either non-reporting or because the data were not keypunched.

C. Cautions in Using and Interpreting the Data

There are three cautionary notes that the reader should consider when using and interpreting the data in this report. First, the Policy and Regulations, as noted earlier, encouraged a high degree of local decision-making and flexibility in designing local basic skills programs. This resulted, as would be expected, in wide variations and differences in:

- the evaluation instruments selected
- the specific grades at which students were tested
- the minimum standards established
- the time of year in which students were tested
- policies and practices on exemptions

[1] Please refer to Section 40.10 of the Regulations for Implementation of the Policy on Basic Skills Improvement for definitions of the Special Education and Limited English Ability exemption categories. The "Other" category included students who were never evaluated during 1981-82 because they were absent whenever tests were administered or students who transferred into a district after testing was completed.

The various figures on statewide student performance of minimum standards presented in this report were compiled from local district data. This information represents, therefore, results based on different combinations of the above. Because of this readers are cautioned in making statewide interpretations and generalizations from the data.

Second, while every effort has been extended to insure the accuracy of the original data as well as the summarized data, some error invariably results. This error can occur at the local district level when information is initially compiled, at the Department level when district data is coded for keypunching, in keypunching itself, at the editing stage, during the process of extracting information from computer printouts, or during the process of proofing final report drafts. It is important, therefore, for the reader not to attach undue precision to the findings and to allow for some small margin of error.

Third, and finally, the reader is cautioned against over-emphasizing small differences in any of the findings. Since statistical tests of significance are not applicable to most of the findings, it probably makes sense not to make much of small percentage differences.

SECTION II - EARLY ELEMENTARY (K-3) STATEWIDE PERFORMANCE IN READING, WRITING, AND MATHEMATICS

A. Number and Percentage of Students Achieving Minimum Standards

Table 1 on page 9 displays the number and percentage of early elementary level students statewide who achieved and who did not achieve minimum standards in reading, writing and mathematics. These figures were reported by 310 districts in all skill areas.

A total of 55,961 students were evaluated by school districts in reading, 55,722 were evaluated in writing, and 55,925 were evaluated in mathematics. The figures for each skill area are not identical because of differences in the specific grades students were evaluated and differences in the number of students exempted or not evaluated.

The percentage of students reported by school districts as achieving minimum standards was 91% for writing, 92% for reading and 93% for mathematics. This represented roughly some 51,000 to 52,000 early elementary students meeting minimum standards in each basic skills area and between 4,000 and 5,000 students not meeting them.

B. Percentage of Students Achieving Minimum Standards by Sex and Race/Ethnicity Reporting Categories

Table 2 on page 10 displays the percentage of early elementary students statewide achieving and not achieving minimum standards in each basic skill area by sex and race/ethnicity reporting categories. The table also reports the total number of students in each category who were evaluated in each skill area.

In all skill areas, the percentage of female students achieving minimum standards was higher than the percentage of male students. The greatest difference was in writing where 94% of the female students as opposed to 89% of the male students were reported as achieving minimum standards. The smallest difference was in mathematics where 93% of the female students achieved standards compared to 92% of the male students. In reading, 93% of the female students met standards versus 91% of the male students.

Table 2 also shows that in all skill areas, the percentage of Whites achieving minimum standards was higher than the percentage of Black, Hispanic or Other students except in mathematics where White and Other student percentages were identical. In reading, 94% of the White students achieved minimum standards. The percentage achieving standards was lowest for Black students with 73% reported as meeting standards.

In writing, 92% of White students achieved minimum standards. The reporting group with the lowest percentage of students achieving standards was Hispanic. Eighty two percent (82%) of Hispanic students met minimum standards.

In mathematics, 94% of White and Other students achieved minimum standards. Black students were the lowest in percentage of students meeting minimum standards. Eighty three percent (83%) of the Black students who were evaluated achieved standards.

TABLE # 1

EARLY ELEMENTARY (K-3) READING, WRITING AND MATHEMATICS

Number and Percentage of Students Achieving Minimum Standards

Skill	Total Districts Reporting	Students Achieving Minimum Standards		Students Not Achieving Minimum Standards		Total Students Evaluated
	#	#	%	#	%	#
Reading	310	51,508	92	4,473	8	55,981
Writing	310	50,796	91	4,906	9	55,722
Mathematics	310	51,812	93	4,112	7	55,925

TABLE # 2

EARLY ELEMENTARY (K-3) - READING, WRITING, AND MATHEMATICS

Achievement of Minimum Standards By Sex and Race/Ethnicity of Students

Sex and Race/Ethnicity Category	Students Achieving Minimum Standards %	Students Not Achieving Minimum Standards %	Total Students Evaluated #
READING			
Male	91	9	28,437
Female	93	7	27,556
Black	73	27	3,182
Hispanic	75	25	1,525
White	94	6	50,541
Other	86	13	758
WRITING			
Male	89	11	28,352
Female	94	6	27,277
Black	86	15	3,194
Hispanic	82	18	1,,518
White	92	8	50,281
Other	91	9	700
MATHEMATICS			
Male	92	8	28,518
Female	93	7	27,405
Black	83	17	3,127
Hispanic	85	5	1,502
White	94	6	50,541
Other	94	6	714

NOTE: Percentages may not add up to 100% due to rounding

C. Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Table 3 on page 12 displays the number and percentage of early elementary level students evaluated and exempted/not evaluated in reading, writing, and mathematics. This table also displays the total number of students reported for this grade level as well as the number and percentage of students exempted/not evaluated by the three types of students in this category - Special Education exemption, Limited English Ability exemption, and Other students (e.g. not evaluated because of absenteeism).

In reading and writing, 92% of the total students reported were evaluated for the achievement of minimum standards while in mathematics 93% of students were evaluated. Of the students exempted or not evaluated, the greatest single percentage was in Special Education. They represented about half of the total exempted/not evaluated category.

TABLE #3

EARLY ELEMENTARY (K-3) - READING, WRITING AND MATHEMATICS

Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Skill	Total Students Evaluated		Total Students Exempted/ Not Evaluated		Total Students Reported	Students Exempted/Not Evaluated					
						Special Education Exemption		Limited English Ability Exemption		Other	
	#	%	#	%	#	#	%	#	%	#	%
Reading	55,981	92	4,588	8	60,569	2,366	4	1,357	2	866	1
Writing	55,722	92	4,725	8	60,447	2,447	4	1,300	2	978	2
Mathematics	55,925	93	4,396	7	60,321	2,235	4	1,281	2	884	1

Note: All percentages were calculated on the basis of total students reported.

12.

SECTION III - LATER ELEMENTARY (4-6) STATEWIDE PERFORMANCE IN READING, WRITING, AND MATHEMATICS

A. Number and Percentage of Students Achieving Minimum Standards

Table 4 on page 14 displays the number and percentage of later elementary level students who achieved and who did not achieve minimum standards in reading, writing, and mathematics. These figures were reported by 306 districts in reading and in mathematics and by 307 districts in writing.

A total of 68,734 students were evaluated by school districts in reading, 68,477 were evaluated in writing, and 68,994 students were evaluated in mathematics. The figures for each skill area are not identical because of differences in the specific grades students were evaluated and differences in the number of students exempted or not evaluated.

The percentage of students reported as achieving standards was 91% in reading and writing and 90% in mathematics. This represented roughly some 62,000 later elementary students meeting minimum standards in each basic skill area and between 6,000 and 7,000 students not meeting them.

B. Percentage of Students Achieving Minimum Standards by Sex and Race/Ethnicity Reporting Categories

Table 5 on page 15 displays the percentage of later elementary students statewide achieving and not achieving minimum standards in each basic skill area by sex and race/ethnicity reporting categories. The table also reports the total number of students in each category who were evaluated in each skill area.

In all skill areas, the percentage of female students achieving minimum standards was higher than the percentage of male students. The greatest difference was in writing where 94% of the female students as opposed to 88% of the male students were reported as achieving minimum standards. The smallest difference was in reading where 92% of the female students achieved standards compared to 90% of the male students. In mathematics, 91% of female students met standards versus 88% of male students.

Table 5 also shows that in all skill areas, the percentage of White and/or Other students achieving minimum standards was higher than the percentage of Black and Hispanic students. In reading, 92% of the White and Other students achieved minimum standards. The percentage achieving standards was lowest for Hispanic students with 71% reported as meeting standards.

In writing, 92% of White students achieved minimum standards. The reporting group with the lowest percentage of students achieving standards was Hispanic. Eighty-two percent (82%) of Hispanic students met minimum standards.

In mathematics, 93% of Other students achieved minimum standards. Black students were the lowest in the percentage of students meeting minimum standards. Seventy three percent (73%) of the Black students who were evaluated achieved standards.

TABLE # 4

LATER ELEMENTARY (4-6) - READING, WRITING AND MATHEMATICS

Number and Percentage of Students Achieving Minimum Standards

Skill	Total Districts Reporting	Students Achieving Minimum Standards		Students Not Achieving Minimum Standards		Total Students Evaluated
	#	#	%	#	%	#
Reading	306	62,419	91	6,312	9	68,734
Writing	307	62,582	91	5,855	9	68,477
Mathematics	306	61,956	90	7,049	10	68,994

14.

TABLE # 5

LATER ELEMENTARY (4-6) - READING, WRITING, AND MATHEMATICS

Achievement of Minimum Standards By Sex and Race/Ethnicity of Students

Sex and Race/Ethnicity Category	Students Achieving Minimum Standards %	Students Not Achieving Minimum Standards %	Total Students Evaluated #
READING			
Male	90	10	35,037
Female	92	8	33,698
Black	76	24	3,627
Hispanic	71	29	1,739
White	92	8	62,597
Other	92	10	753
WRITING			
Male	88	12	34,756
Female	94	6	33,709
Black	83	17	3,422
Hispanic	82	18	1,741
White	92	8	62,524
Other	89	11	751
MATHEMATICS			
Male	88	12	35,092
Female	91	9	33,702
Black	73	27	3,583
Hispanic	80	19	1,758
White	91	9	62,862
Other	93	8	750

NOTE: Percentages may not add up to 100% due to rounding

C. Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Table 6 on page 17 displays the number and percentage of later elementary level students evaluated and exempted/not evaluated in reading, writing, and mathematics. This table also displays the total number of students reported for this grade level as well as the number and percentage of students exempted/not evaluated by the three types of students in this category - Special Education exemption, Limited English Ability exemption, and Other students (e.g. not evaluated because of absenteeism).

In reading and mathematics, 93% of the total students reported were evaluated for the achievement of minimum standards while in writing 92% of students were evaluated. Of the students exempted or not evaluated, the greatest single percentage was in Special Education. They represented about half of the total exempted/not evaluated category.

TABLE #6

LATER ELEMENTARY (4-8)- READING, WRITING AND MATHEMATICS

Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Skill	Total Students Evaluated		Total Students Exempted/ Not Evaluated		Total Students Reported	Students Exempted/Not Evaluated					
						Special Education Exemption		Limited English Ability Exemption		Other	
	#	%	#	%	#	#	%	#	%	#	%
Reading	68,734	93	5,075	7	73,809	3,137	4	1,052	1	888	1
Writing	68,477	92	5,905	8	74,382	3,313	4	1,039	1	1,559	2
Mathematics	68,994	93	5,043	7	74,037	3,143	4	995	1	921	1

NOTE: All percentages were calculated on the basis of total students reported.

17.

SECTION IV - SECONDARY (7-12) STATEWIDE PERFORMANCE IN READING, WRITING, AND MATHEMATICS

A. Number and Percentage of Students Achieving Minimum Standards

Table 7 on page 19 displays the number and percentage of secondary level students who achieved and did not achieve minimum standards in reading, writing, and mathematics. These figures were reported by 267 districts in reading and mathematics and by 265 districts in writing.

A total of 75,847 students were evaluated by school districts in reading, 74,621 were evaluated in writing, and 76,084 students were evaluated in mathematics. The figures for each skill area are not identical because of differences in the specific grades students were evaluated and differences in the number of students exempted or not evaluated.

The percentage of students reported as achieving standards was 89% in reading and 88% in writing and mathematics. This represented roughly between 65,000 and 67,000 secondary students meeting minimum standards in each basic skill area and 8,000 students not meeting them.

B. Percentage of Students Achieving Standards by Sex and Race/Ethnicity Reporting Categories

Table 8 on page 20 displays the percentage of secondary students statewide achieving and not achieving minimum standards in each basic skill area by sex and race/ethnicity reporting categories. The table also reports the total number of students in each category who were evaluated in each skill area.

In all skill areas, the percentage of female students achieving minimum standards was higher than the percentage of male students. The greatest difference was in writing where 93% of the female students as opposed to 83% of the male students were reported as achieving minimum standards. The smallest difference was in mathematics where 89% of the female students achieved minimum standards compared to 88% of the male students. In reading, 90% of female students met standards versus 87% of male students.

Table 8 also shows that in all skill areas, the percentage of White students achieving minimum standards was higher than the percentage of Black, Hispanic or Other students. In reading, 90% of White students achieved minimum standards. The percentage achieving standards was lowest for Hispanic students with 68% reported as meeting standards.

In writing, 89% of White students achieved minimum standards. The reporting group with the lowest percentage of students achieving standards was Hispanic. Seventy-five percent (75%) of Hispanic students met minimum standards.

In mathematics, 90% of White students achieved minimum standards. Black and Hispanic students were the lowest in percentage of students meeting minimum standards. Seventy-one percent (71%) of Black and Hispanic students who were evaluated achieved standards.

TABLE # 7

SECONDARY (7-12) - READING, WRITING AND MATHEMATICS

Number and Percentage of Students Achieving Minimum Standards

Skill	Total Districts Reporting	Students Achieving Minimum Standards		Students Not Achieving Minimum Standards		Total Students Evaluated
	#	#	%	#	%	#
Reading	267	67,157	89	8,689	11	75,847
Writing	265	65,398	88	9,223	12	74,621
Mathematics	267	67,258	88	8,829	12	76,084

TABLE #8

SECONDARY (7-12) - READING, WRITING, AND MATHEMATICS

Achievement of Minimum Standards By Sex and Race/Ethnicity of Students

Sex and Race/Ethnicity Category	Students Achieving Minimum Standards %	Students Not Achieving Minimum Standards %	Total Students Evaluated #
READING			
Male	87	13	38,949
Female	90	10	36,884
Black	69	32	3,792
Hispanic	68	32	1,970
White	90	10	69,225
Other	82	18	863
WRITING			
Male	83	17	38,114
Female	93	7	36,541
Black	77	23	3,502
Hispanic	75	25	1,809
White	89	12	68,408
Other	87	13	848
MATHEMATICS			
Male	08	12	39,102
Female	89	11	36,982
Black	71	29	3,857
Hispanic	71	29	1,882
White	90	10	69,517
Other	88	12	833

NOTE: Percentages may not add up to 100% due to rounding

C. Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Table 9 on page 22 displays the number and percentage of secondary level students evaluated and exempted/not evaluated in reading, writing, and mathematics. This table also displays the total number of students reported for this grade level as well as the number and percentage of students exempted/not evaluated by the three types of students in this category - Special Education exemption, Limited English Ability exemption, and Other students (e.g. not evaluated because of absenteeism).

In reading and mathematics, 92% of the total students reported were evaluated for the achievement of minimum standards while in writing 91% of students were evaluated. Of the students exempted or not evaluated, the greatest single percentage was in Special Education. They represented about half of the total exempted/not evaluated category.

D. Achievement of Minimum Standards in Secondary Level Follow-Up Testing

The Basic Skills Improvement Policy and Regulations require districts to evaluate student achievement of minimum standards at the seconday level "...at least once at each succeeding grade level until the student has achieved the minimum standards." During 1981/82, therefore, districts evaluated those secondary level students who had either not achieved minimum standards or had not been evaluated in the preceding year.

Table 10 on page 23 displays the achievement of minimum standards overall, by sex and race/ethnicity in the follow-up testing conducted by school districts during 1981/82. It shows, in addition, the total number of students evaluated as well as the number not evaluated.

A total of 8,307 students were evaluated by school districts (237) in reading, 9,674 by school districts (248) in writing, and 7,808 by school districts (235) in mathematics. Conversely, 1,667 students or 17% of those eligible for retesting were not evaluated in reading. For writing there were 2,026 students (17% of those eligible) not evaluated, and in mathematics 2,004 students (20% of those eligible) were not evaluated.

The percentage of students reported by school districts as achieving minimum standards in the follow-up testing was highest in writing with 73% of students achieving standards. The percenage of students achieving standards in reading was 70% and in mathematics 67%. This means that for 1982/83, if those not evaluated are included, there are between 4,173 and 4,679 students statewide who have not yet achieved minimum standards and must be retested in one or more of the basic skills.

Table 10 also shows that in reading and writing the percentage of female students achieving minimum standards on the retesting was higher than the percentage of male students. However, a higher percentage of male students achieved minimum standards in mathematics than did female students. The greatest difference between the sexes was in writing where 79% of the female students as opposed to 69% of the male students were reported as achieving minimum standards. The smallest difference was in mathematics where 68% of the male students achieved minimum standards compared to 67% of the female students. In reading, 71% of female students met standards versus 69% of male students.

TABLE # 9

SECONDARY (7-12) - READING, WRITING AND MATHEMATICS

Number and Percentage of Students Evaluated and Exempted/Not Evaluated

Skill	Total Students Evaluated		Total Students Exempted/ Not Evaluated		Total Students Reported	Students Exempted/Not Evaluated					
						Special Education Exemption		Limited English Ability Exemption		Other	
	#	%	#	%	#	#	%	#	%	#	%
Reading	75,847	92	6,368	8	82,215	3,532	4	1,137	1	1,723	2
Writing	74,621	91	7,503	9	82,124	3,621	4	1,074	1	2,805	3
Mathematics	76,084	92	6,397	8	82,481	3,544	4	1,084	1	1,770	2

NOTE: All percentages were calculated on the basis of total students reported.

NOTE: Percentages may not add up to 100%, due to rounding.

TABLE #10

SECONDARY (7-12) - READING, WRITING, MATHEMATICS

FOLLOW-UP TESTING

Achievement of Minimum Standards Overall and by Sex and Race/Ethnicity

READING	Students Achieving Minimum Standards %	Students Not Achieving Minimum Standards %	Total Evaluated #	Total Eligible/ Not Evaluated #
Male	69	31	4,183	967
Female	71	29	3,592	720
Black	50	50	747	137
Hispanic	59	41	517	130
White	73	27	6,864	1,376
Other	54	46	109	22
TOTALS	70	30	8,307	1,667
WRITING				
Male	69	31	6,353	1,223
Female	79	21	3,361	813
Black	57	43	483	175
Hispanic	58	42	276	170
White	74	26	8,773	1,645
Other	71	29	113	47
TOTALS	73	27	9,674	2,026
MATHEMATICS				
Male	68	32	4,183	1,107
Female	67	33	3,592	884
Black	47	53	617	216
Hispanic	59	41	389	197
White	70	30	6,605	1,575
Other	64	36	114	29
TOTALS	67	33	7,808	2,004

Finally, Table 10 shows that in all skill areas, the percentage of White students achieving standards on the retesting was higher than the percentage of Black, Hispanic or Other students. In reading, 73% of White students achieved minimum standards. The percentage achieving standards was lowest for Black students with 50% reported as meeting standards.

In writing, 74% of White students achieved minimum standards. The reporting group with the lowest percentage of students achieving standards was Black. Fifty-seven percent (57%) of Black students met minimum standards.

In mathematics, 70% of White students achieved minimum standards. Black students were the lowest in the percentage of students meeting standards. Forty-seven percent (47%) of Black students who were evaluated achieved standards.

E. Secondary Level Listening Plans

During 1981/82, about 267 districts submitted for approval their secondary level basic skills plans for Listening as required under the Basic Skills Improvement Policy and Regulations. Complete information on tests, grade levels for initial testing and standards was not available for all these districts at the time this report was being prepared. The information below, therefore, is based on data provided from 186 school systems.

One hundred and eighty-two school systems indicated plans to use the State Listening test (4 additional districts, not included in this analysis have indicated plans to use either a local or commercial test). Forty six percent (46%) of these districts plan their initial evaluations at the 8th grade, 33% at the 9th grade, and 21% at the 7th grade.

The State Listening Test is a 22 item multiple choice test using an audio cassette tape recording of passages drawn from a news story, public service announcement, a conversation, a commercial, a telephone conversation and a teacher's announcement. Students hear the instructions, then a passage and then questions about the passage. After each question there is a pause to allow students time to answer the question on an answer sheet.

Forty-eight percent (48%) of districts reported setting their standard at between 14-16 correct on the State Listening Test. Twenty-four percent (24%) set their standard between 11-13 correct; 19% between 17-19 correct and the remainder (9%) at below 11 correct.

SECTION V - EVALUATION INSTRUMENTS ADMINISTERED BY SCHOOL DISTRICTS

The various tables in this section provide information for all skills and grade levels on the types of instruments administered by school districts to evaluate student achievement of minimum standards.

A. Early Elementary Level

Table 11 on page 27 displays information on the name and and year of the evaluation instruments most frequently administered by school districts at the early elementary level. The table also indicates the number and percentage of districts which administered these instruments.

For all skill areas, the most widely administered instruments were those developed locally by school districts. The California Achievement Test was the second most commonly used instrument in all skills. The third most frequently used instrument in all skills was the Iowa Test of Basic Skills. The following commercial tests were also administered by several districts in all skill areas: the Comprehensive Test of Basic Skills, the Metropolitan Achievement Test, the Stanford Achievement Test, the SRA Achievement Series, and the Stanford Diagnostic Test.

B. Later Elementary Level

Table 12 on page 28 displays information on the name and year of the evaluation instruments most frequently administered by school districts at the later elementary level. The table also indicates the number and percentage of districts which administered these instruments.

For all skill areas, the most widely administered instruments were ones developed locally by school districts. As was the case for the early elementary level, the second and third most commonly used tests were the California Achievement Test and the Iowa Test of Basic Skills respectfully. Other tests used by several districts included the Stanford Achievement Test, the SRA Achievement Series, the Metropolitan Achievement Test, and the Stanford Diagnostic Test.

C. Secondary Level

Table 13 on page 29 displays information on the name and year of the evaluation instruments most frequently administered by school districts at the secondary level. The table also indicates the number and percentage of districts which administered these instruments.

For all skill areas, the most widely administered instruments were the state tests. These were used by between 78% and 79% of all school districts. In reading and mathematics, the second most commonly used instrument was the California Achievement Test. In writing, 81% of districts used state tests. The second most commonly administered instruments were ones developed locally by districts. Other commercial instruments used by several districts in reading and mathematics included the Comprehensive Test of Basic Skills and the Iowa Test of Basic Skills.

TABLE # 11

Evaluation Instruments Administered by Number and Percentage of School Districts

EARLY ELEMENTARY (K-3) - READING

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	52	17
California Achievement Test	1977-78	50	16
Iowa Test of Basic Skills	1978-82	43	14
Stanford Achievement Test	1972-74	23	7
Metropolitan Achievement Test	1977-78	22	7
SRA Achievement Series	1978-79	20	6
Stanford Diagnostic	1976	19	6
Comprehensive Test of Basic Skills	1981	18	6
Comprehensive Test of Basic Skills	1973-75	16	5
Sequential Test of Educational Progress, Circus	1979	6	2
Perscriptive Reading Inventory	1980	6	2
Miscellaneous Standardized Tests	N.A.	35	11
TOTALS		310	99

EARLY ELEMENTARY (K-3) - WRITING

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	230	74
Iowa Test of Basic Skills	1978-79	22	7
California Achievement Test	1977-78	21	7
Metropolitan Achievement Test	1978-79	8	3
SRA Achievement Series	1978	6	2
Comprehensive Test of Basic Skills	1981	6	2
Stanford Achievement Test	1972-73	5	2
Miscellaneous Standardized Tests	N.A.	12	4
TOTALS		310	101

EARLY ELEMENTARY (K-3) - MATHEMATICS

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	77	25
California Achievement Test	1977-78	51	16
Iowa Test of Basic Skills	1978-82	38	12
Stanford Achievement Test	1972-74	24	8
Comprehensive Test of Basic Skills	1973-75	20	6
Metropolitan Achievement Test	1978	18	6
SRA Achievement Series	1978-79	17	5
Comprehensive Test of Basic Skills	1981	17	5
Stanford Diagnostic	1976-77	11	4
Diagnostic Mathematics Inventory	1975-78	6	6
Sequential Tests of Educational Process, Circus	1979	6	2
Miscellaneous Standardized Tests	N.A.	25	8
TOTALS		310	99

NOTE: Percentage may not add up to 100% due to rounding

TABLE # 12

Evaluation Instruments Administered by Number and Percentage of School Districts

LATER ELEMENTARY (4-6) - READING

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	50	16
California Achievement Test	1977-78	48	16
Iowa Test of Basic Skills	1978-82	41	13
Stanford Achievement Test	1972-74	23	8
SRA Achievement Series	1978-79	22	7
Metropolitan Achievement Test	1977-78	22	7
Stanford Diagnostic	1976	21	7
Comprehensive Test of Basic Skills	1973-75	18	6
Comprehensive Test of Basic Skills	1981	17	6
Sequential Tests of Educational Progress	1979	7	2
Perscriptive Reading Inventory	1980	6	2
Miscellaneous Standarized Tests	N.A.	31	10
TOTALS		306	100

LATER ELEMENTARY (4-6) - WRITING

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	232	76
California Achievement Test	1977-78	17	6
Iowa Test of Basic Skills	1978-80	12	4
Iowa Test of Basic Skills	1971	9	3
SRA Achievement Series	1978-79	8	3
Comprehensive Test of Basic Skills	1981	7	2
Metropolitan Achievement Test	1978	6	2
Stanford Achievement Test	1972-73	5	2
Miscellaneous Standarized Tests	N.A.	11	4
TOTALS		307	102

LATER ELEMENTARY (4-6) - MATHEMATICS

Evaluation Instrument	Year	# Districts	% Districts
Local Test	N.A.	78	25
California Achievement Test	1977-78	49	16
Iowa Test of Basic Skills	1978-82	35	11
Stanford Achievement Test	1972-74	24	8
Comprehensive Test of Basic Skills	1973-75	20	7
SRA AChievement Series	1978-79	20	7
Metropolitan Achievement Test	1978	17	6
Comprehensive Test of Basic Skills	1981	17	6
Stanford Diagnostic	1976	13	4
Sequential Test of Educational Progress	1979	7	2
Diagnostic Mathematics Inventory	1975-78	5	2
Miscellaneous Standarized Tests	N.A.	21	6
TOTALS		306	100

NOTE: Percentage may not add up to 100% due to rounding

TABLE # 13

Evaluation Instruments Administered by Number and Percentage of School Districts

SECONDARY (7-12) - READING

Evaluation Instrument	Year	# Districts	% Districts
State Test	N.A.	212	79
California Achievement Test	1977-78	14	5
Comprehensive Test of Basic Skills	1973-75	7	3
Iowa Test of Basic Skills	1978	7	3
Comprehensive Test of Basic Skills	1981	6	2
Stanford Achievement Test	1972-73	5	2
Locally Developed Tests	N.A.	3	1
Miscellaneous Commercial Tests	N.A.	13	5
TOTALS		267	100

SECONDARY (7-12) - WRITING

Evaluation Instrument	Year	# Districts	% Districts
State Test	N.A.	207	78
Local Test	N.A.	57	22
Miscellaneous Commercial Tests	N.A.	1	
TOTALS		265	100

SECONDARY (7-12) - MATHEMATICS

Evaluation Instrument	Year	# Districts	% Districts
State Test	N.A.	217	81
California Achievement Test	1977-78	13	5
Iowa Test of Basic Skills	1978	8	3
Comprehensive Test of Basic Skills	1973-75	7	3
Stanford Achievement Test	1972-73	5	2
Locally Developed Tests	N.A.	4	1
Comprehensive Test of Basic Skills	1981	5	2
Miscellaneous Commercial Tests	N.A.	8	3
TOTALS		267	100

NOTE: Percentage may not add up to 100% due to rounding

SECTION VI - STATEWIDE STATISTICS ON MINIMUM STANDARDS ESTABLISHED IN READING, WRITING, AND MATHEMATICS

The tables in this section provide summary statistics for all skills and grade levels on the minimum standards established by school districts. The statistics displayed on standards in reading and mathematics include the number and percentage of districts that established standards within specified ranges (e.g. 90%-100% of the items correct, 80%-89% of the items correct, etc.) This data is provided for each grade (e.g., 1, 2 or 3) as well as state totals for the range of minimum standards. The data for reading and mathematics include the statewide mean (average), median (middle score), and mode (most frequent score) for each skill area. In addition, the statewide mean (average) standard is shown separately for each of the major tests used in reading and mathematics.

The statistics displayed in writing only include the number and percentage of districts that established standards at specified holistic scores and the number and percentage of districts that established standards on objective-item tests. No statewide means, medians, or modes are provided on writing standards because holistic scores do not provide scales that can be used to compute these statistics. The reader should note that holistic scoring is a very relative process so that there is no way of comparing one score to another. The holistic score assigned to student writing samples is relative to the scoring rubric used by raters and the sample of papers used to rate papers at a particular point in time.

A. Early Elementary Level

Tables 14 and 15 on pages 31 and 32 provide statistics on the early elementary level minimum standards established by school districts in reading, writing, and mathematics. In reading, the mean standard statewide was 57%, the median standard was 53%, and the mode was 52%. In mathematics, the mean standard was 56%, the median standard was 55%, and the mode was 80%.

Table 16 on page 33 indicates the mean standard established statewide on each of the major tests used to assess reading and mathematics at the early elementary level. The mean standard was highest on local tests with a standard of 72% correct set on local tests in mathematics and 70% correct in reading. The wide differences between the standard set on local tests and those set on commercial tests reflect the fact that the latter are generally norm referenced instruments in which the score of the average student will normally lie in the middle range (roughly 40% to 60% correct). The few commercial tests that are <u>not</u> norm-referenced (e.g. Diagnostic Mathematics Inventory) will generally show higher scores which reflect the fact that they are focused on student attainment independent of how well other students achieved.

TABLE # 14

EARLY ELEMENTARY (K-3) - READING AND MATHEMATICS

Statewide Range of Minimum Standards By Percentage of District

Range of Standards % Distribution	READING Grade 1 %	Grade 2 %	Grade 3 %	State Totals #	State Totals %	MATHEMATICS Grade 1 %	Grade 2 %	Grade 3 %	State Totals #	State Totals %
90-100		3	1	4	1	100			1	
80-89	50	15	8	30	10		11	11	34	11
70-79	50	13	16	47	16		12	17	49	16
60-69		18	14	45	15		18	14	43	14
50-59		29	27	83	27		35	18	65	21
40-49		18	22	63	20		16	21	60	20
30-39		2	10	24	8		8	16	45	15
Below 30		2	4	10	4			4	7	2
Total Districts (#)	2	60	244	306		1	62	242	305	

Statewide Mean for Reading is 57

Statewide Median for Reading is 53

Statewide Mode for Reading is 52

Statewide Mean for Mathematics is 56

Statewide Median for Mathematics is 55

Statewide Mode for Mathematics is 80

Note: Percentages may not add up to 100% due to rounding

TABLE # 15

EARLY ELEMENTARY (K-3) - WRITING

Statewide Range of Minimum Standards by Number and Percentage of Districts

Range of Standards	Grade 1		Grade 2		Grade 3		State Total	
	#	%	#	%	#	%	#	%
2/4					7	3	7	2
3/8			1	2	29	11	30	10
4/8			3	7	86	32	89	29
5/8			4	10	13	5	17	5
6/8								
Other Holistic Scores			8	20	22	8	30	10
Objective Test Scores			23	56	94	35	117	38
Not Keypunched	1	100	2	5	17	6	20	6
Total Districts	1		41	13	268	86	310	100

TABLE 16

EARLY ELEMENTARY (K-3) - READING AND MATHEMATICS

*Mean Standard By Evaluation Instrument Administered

READING

Evaluation Instrument	# Districts	Mean Standard(%)
Local Test	52	70
California Achievement Test, 1977-78	50	53
Iowa Test of Basic Skills, 1978-82	43	46
Stanford Achievement Test, 1972-74	23	50
Metropolitan Achievement Test, 1977-78	21	51
SRA Achievement Series, 1978-79	20	50
Stanford Diagnostic, 1976	18	74
Comprehensive Test of Basic Skills, 1973-75	16	52
Perscriptive Reading Inventory (CTB/McGraw Hill) 1980	8	73
Seqeuntial Tests of Educational Progress, Circus, 1979	6	59
Iowa Test of Basic Skills, 1971	5	43

MATHEMATICS

Evaluation Instrument	# Districts	Mean Standard (%)
Local Test	75	72
California Achievement Test, 1977-78	51	46
Iowa Test of Basic Skills, 1978/82	38	46
Stanford Achievement Test, 1972-74	24	45
Comprehensive Test of Basic Skills, 1973-75	20	60
Metropolitan Achievement Test, 1978	17	49
SRA Achievement Series, 1978-79	17	47
Stanford Diagnostic, 1976-77	10	57
Sequential Tests of Educational Progress, Circus, 1979	6	63
Diagnostic Mathematics Inventory (CTB/McGraw Hill), 1975-78	6	79

*Tests Reported were used by 5 or more districts

B. Later Elementary Level

Tables 17 and 18 on pages 35 and 36 provide statistics on the later elementary minimum standards established by school districts in reading, writing and mathematics. In reading, the mean standard statewide was 54%, the median standard was 53%, and the mode was 40%. In mathematics the mean standard was 53%, the median standard was 51%, and the mode was 39%.

Table 19 on page 37 indicates the mean standard established statewide on each of the major tests used to assess reading and mathematics at the later elementary level. The mean standard was highest on local tests with a standard of 67% correct set on both local reading and mathematics tests. The wide differences between the standards set on local tests and those set on commercial tests reflect the fact that the latter are generally norm referenced instruments in which the score of the average student will normally lie in the middle range (roughly 40% to 60% correct). The few commercial tests that are not norm-referenced (e.g. Diagnostic Mathematics Inventory) will generally show higher scores which reflect the fact that they are focused on student attainment independent of how well other students achieved.

TABLE # 17

LATER ELEMENTARY (4-6) - READING AND MATHEMATICS

Statewide Range of Minimum Standards By Percentage of District

Range of Standards % Distribution	READING Grade 4 %	Grade 5 %	Grade 6 %	State Totals #	State Totals %	MATHEMATICS Grade 4 %	Grade5 %	Grade6 %	State Totals #	State Totals %
90-100		3		4	1					
80-89	17	4	10	20	7	10	3	6	15	5
70-79	17	12	9	32	11	30	13	12	39	13
60-69		19	14	48	16	10	19	16	53	18
50-59	17	19	29	71	23	20	19	20	58	20
40-49	42	23	26	76	25	20	17	28	68	23
30-39	8	15	12	40	14	10	20	15	53	17
Below 30		6	1	10	3		8	2	16	5
Total Districts (#)	12	156	133	301		10	153	139	302	

Statewide Mean for Reading is 54

Statewide Median for Reading is 53

Statewide Mode for Reading is 40

Statewide Mean for Mathematics is 53

Statewide Median for Mathematics is 51

Statewide Mode for Mathematics is 39

Note: Percentages may not add up to 100% due to rounding

TABLE #18

LATER ELEMENTARY (4-6) - WRITING

Statewide Range of Minimum Standards By Number and Percentage of Districts

Range of Standards	Grade 4		Grade 5		Grade 6		State Total	
	#	%	#	%	#	%	#	%
2/4			3	2	5	3	8	3
3/8	1	10	20	13	15	10	36	12
4/8	1	10	40	27	51	34	92	30
5/8			14	9	1	1	15	5
6/8								
Other Holistic Scores	2	20	17	11	25	17	44	14
Objective Test Scores	6	60	48	32	42	28	96	31
Not Keypunched			7	5	9	6	16	5
Total Districts	10	3	149	49	148	48	307	100

TABLE 19

LATER ELEMENTARY (4-6) - READING AND MATHEMATICS

*Mean Standard by Evaluation Instrument Administered

READING

Evaluation Instrument	# Districts	Mean Standard(%)
Local Test	49	67
California Achievement Test, 1977-78	48	48
Iowa Test of Basic Skills, 1978-82	41	45
Stanford Achievement Test, 1972-74	23	41
SRA Achievement Series, 1978-79	22	48
Metropolitan Achievement Test, 1977-78	21	51
Stanford Diagnostic, 1976	20	70
Comprehensive Test of Basic Skills, 1973-75	18	49
Sequential Tests of Educational Progress, 1979	7	67
Perscriptive Reading Inventory (CTB/McGraw Hill), 1980	7	74
Iowa Test of Basic Skills, 1971	6	50

MATHEMATICS

Evaluation Instrument	# Districts	Mean Standard (%)
Local Test	77	67
California Achievement Test, 1977-78	49	42
Iowa Test of Basic Skills, 1978-82	35	44
Stanford Achievement Test, 1972-74	24	42
Comprehensive Test of Basic Skills, 1973-75	20	58
SRA Achievement Series, 1978-79	20	46
Metropolitan Achievement Test, 1978	16	48
Stanford Diagnostic, 1976	12	56
Sequential Tests of Educational Progress, 1979	7	65
Diagnostic Mathematics Inventory (CTB/McGraw Hill), 1975-78	6	70

*Tests Reported were used by 5 or more districts

C. Secondary Level Statistics

Tables 20 and 21 on pages 39 and 40 provide statistics on the secondary level minimum standards in reading, writing, and mathematics. In reading, the mean standard was 59%, the median standard was 60% and the mode was 60%. In mathematics, the mean standard was 56%, the median standard was 58%, and the mode was 53%.

Table 22 on page 41 indicates the mean standard established statewide on each of the major tests used to assess reading and mathematics at the secondary level. The mean standard was highest on the state tests with a standard of 62% correct set on these tests in reading and 59% correct in mathematics. The second highest mean standard was established on locally developed tests with a standard of 62% correct set in reading and 57% in mathematics. The wide differences between the standards set on the state and local tests and those set on commercial tests reflect the fact that the latter are, for the most part, norm referenced instruments in which the score of the average student will normally lie in the middle range (roughly 40% to 60% correct). The few commercial tests that are not norm referenced will generally show higher scores which reflect the fact that they are targeted on student attainment independent of how well other students achieved.

TABLE # 20

SECONDARY (7-12) - READING AND MATHEMATICS

Statewide Range of Minimum Standards By Percentage of District

Range of Standards % Distribution	READING Grade 7 %	Grade 8 %	Grade 9 %	State Totals #	State Totals %	MATHEMATICS Grade 7 %	Grade 8 %	Grade 9 %	State Totals #	State Totals %
90-100							1		1	
80-89		2	2	6	2		1	4	5	2
70-79	20	12	17	38	15	16	6	5	17	6
60-69	16	43	45	109	41		30	40	82	31
50-59	36	25	27	71	27	42	36	34	95	35
40-49	20	11	6	29	11	32	14	14	42	16
30-39	8	6	1	13	5	11	11	3	24	9
Below 30										
Total Districts (#)	25	165	76	266		19	173	74	266	

Statewide Mean for Reading is 59

Statewide Median for Reading is 60

Staewide Mode for Reading is 60

Statewide Mean for Mathematics is 56

Statewide Median for Mathematics is 58

Statewide Mode for Mathematics is 53

Note: Percentages may not add up to 100% due to rounding

TABLE #21

SECONDARY (7-12) - WRITING

Statewide Range of Minimum Standards By Number and Percentage of Districts

Range of Standards	Grade 7		Grade 8		Grade 9		State Total	
	#	%	#	%	#	%	#	%
2/4	1	5	3	2	6	7	10	4
3/8	5	23	14	9	9	10	28	11
4/8	8	36	55	35	28	33	91	34
5/8			11	7	10	12	21	8
6/8			1	1	2	2	3	1
6/16	1	5	5	3	4	5	10	4
7/16			9	6	7	8	16	6
8/16	3	14	33	21	9	10	45	17
9/16	1	5	10	6	1	1	12	5
Other Holistic Scoring	2	9	13	8	6	7	21	8
Objective Test Scores			2	1	1	1	3	1
Not Keypunched	1	5	1	1	3	3	5	2
Total Districts	22	8	157	59	86	32	265	100

TABLE 22

SECONDARY (7-12) - READING AND MATHEMATICS

*Mean Standard by Evaluation Instrument Administered

READING

Evaluation Instrument	# Districts	Mean Standard(%)
State Test	212	62
California Achievement Test, 1977-78	14	46
Iowa Test of Basic Skills, 1978	7	46
Comprehensive Test of Basic Skills, 1973-75	7	45
Stanford Achievement Test, 1972-73	5	41
Comprehensive Test of Basic Skills, 1981	6	50
Locally Developed Tests	3	62
Miscellaneous Commercial Test	13	55

MATHEMATICS

Evaluation Instrument	# Districts	Mean Standard(%)
State Test	217	59
California Achievement Test, 1977-78	13	42
Iowa Test of Basic Skills, 1978	8	43
Comprehensive Test of Basic Skills, 1973-75	7	41
Stanford Achievement Test, 1972-73	5	42
Comprehensive Test of Basic Skills, 1981	5	43
Locally Developed Tests	4	57
Miscellaneous Commercial Test	8	44

*Commercial Tests Reported were used by 5 or more districts

SECTION VII - INITIAL TESTING GRADES FOR THE EVALUATION OF STUDENTS IN READING, WRITING, AND MATHEMATICS

Table 23 on page 43 displays the number and percentage of school districts which evaluated students at specific grades in reading, writing, and mathematics for the early elementary, later elementary, and secondary grade levels.

A. Early Elementary

In all skill areas, third grade was the most common grade at the early elementary level for school district evaluation of students. The percentage of systems evaluating students in third grade ranged from 86% in writing to 79% in mathematics. Grade two was the second most common grade, followed by first grade where only one or two percent of students were evaluated.

B. Later Elementary

In all skill areas, fifth grade was the most common grade at the later elementary level for school district evaluation of students. The percentage of systems evaluating students in fifth grade ranged from 52% in reading to 49% in writing. Sixth grade was the second most common grade, with the percentage of systems only slightly below the fifth grade figures. Only three to four percent of the districts evaluated students at fourth grade.

C. Secondary

In all skill areas, eighth grade was the most common grade at the secondary level for school district evaluation of students. The percentage of systems evaluating students in eighth grade ranged from 65% in mathematics to 59% in writing. Ninth grade was the second most common grade, with the percentage of districts ranging from 32% in writing to 28% in mathematics and reading. Only seven to nine percent of the districts evaluated students at seventh grade.

TABLE # 23

Number and Percentage of Districts Reporting at Each Grade Level

EARLY ELEMENTARY (K-3) - READING, WRITING AND MATHEMATICS

Skill	Grade 1		Grade 2		Grade 3	
	#	%	#	%	#	%
Reading	2	1	60	19	248	80
Writing	1		41	13	268	86
Mathematics	1		63	20	246	79

LATER ELEMENTARY (4-6) - READING, WRITING AND MATHEMATICS

Skill	Grade 4		Grade 5		Grade 6	
	#	%	#	%	#	%
Reading	12	4	158	52	136	44
Writing	10	3	149	49	148	48
Mathematics	10	3	154	50	142	46

SECONDARY (7-12) - READING, WRITING AND MATHEMATICS

Skill	Grade 7		Grade 8		Grade 9	
	#	%	#	%	#	%
Reading	25	9	166	62	76	28
Writing	22	8	157	59	86	32
Mathematics	19	7	174	65	74	28

NOTE: Percentages may not add up to 100% due to rounding

SECTION VIII - TWO YEAR SUMMARY ANALYSIS OF STATEWIDE RESULTS

The preceding chapters presented summary statewide data and information on student achievement of basic skills at the early elementary, later elementary and secondary levels. In addition, information on evaluation instruments used, minimum standards established and grade levels at which tests were administered was also summarized. The purpose of this chapter is to provide some summary data, analysis and observations across all grade levels, skills and reporting categories. In addition to indicating patterns in the 1981/82 data this chapter will draw from the 1980/81 report to show patterns and trends for the two year period.

A. Comparisons of Statewide Performance Across Grade Levels and Skills for 1980/81 and 1981/82

Table 24 on page 45 displays the percentage of students statewide who were reported by school districts as achieving minimum standards in 1980/81 and 1981/82. This data is provided for all grade levels and skills. The following observations are based on the percentages found in this table:

1. Across all skills and grade levels, the percentage of students statewide reported to have achieved minimum standards ranged from 86% to 93% in 1980/81 and 88% to 93% in 1981/82. These figures indicate that for both years the vast majority of students across the state have achieved the minimum performance expectations established by local communities. However, there are several thousand students across the state at all grade levels and skills who were reported during 1981/82 as not having achieved minimum standards. The number of students statewide who did not achieve minimum standards in initial evaluations ranged from a low of 4,112 in mathematics at the early elementary level to a high of 9,223 students in writing at the secondary level. Further, as noted on page 21 there are over 4,000 additional students in one or more of the basic skills at the secondary level who did not meet standards on the follow-up testing conducted during 1981/82.

2. Across all grade levels for both 1980/81 and 1981/82, reading was the skill in which the greatest percentage of students achieved minimum standards. Writing was the skill in which the smallest percentage of students were reported as having achieved minimum standards. However, the percentage differences between and among the three skill areas are not very great.

3. Across all skills, for both 1980/81 and 1981/32, early elementary was the grade level in which the greatest percentage of students achieved standards; secondary was the grade level in which the smallest percentage of students were reported as having achieved minimum standards. As was the case when comparing results on skills, the percentage differences between and among the three grade levels were not very great.

The preceding observations indicate, in short, that the patterns of statewide performance were fairly similar for the two year period.

TABLE # 24

ALL GRADE LEVELS AND SKILLS

Percentage of Students Achieving Minimum Standards - 1980/81 and 1981/82

Grade Level	Reading		Writing		Mathematics	
	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82
Early Elementary	93	92	89	91	93	93
Later Elementary	91	91	89	91	89	90
Secondary	89	89	86	88	89	88

B. Comparisons of Statewide Performance By Sex and Race/Ethnicity of Students for 1980/81 and 1981/82

Table 25 on page 47 displays the percentage of students achieving minimum standards across grade levels and skills by the sex and race/ethnicity of students for 1980/81 and 1981/82. The following observations are based on the percentages found in this table:

1. Across all skills and grade levels, the percentage of female students who achieved standards exceeded the percentage of male students who achieved standards for both 1980/81 and 1981/82. The percentage difference between the two sexes was approximately the same for each of the two years. The differences were largest in writing, smallest in mathematics and generally larger at the secondary level than at the elementary levels.

2. Across all skills and grade levels, the percentage of Whites meeting minimum standards was larger than the percentage of Black and Hispanics for both years. The size of the percentage differences between White students and Black students was wider in 1981/82 than in 1980/81 and was most pronounced in reading and at the secondary level. The size of the percentage differences between White students and Hispanic students was slightly less in 1981/82 than in 1980/81 but, as with Black students was most pronounced in reading and at the secondary level. Overall, the differences ranged from a low in early elementary writing (4-10% across both years) to a high in secondary reading (16-22% across both years).

3. Across all skills and grade levels, the percentage of White students meeting minimum standards was the same or increased between 1980/81 and 1981/82. The percentage of Black students meeting standards decreased in all except two cases between 1980/81 and 1981/82. The percentage of Hispanic students meeting minimum standards showed generally offsetting increases and decreases between the two years.

4. Across all skills and grade levels, the percentage of Other students (predominately Asian-American students) meeting minimum standards was larger than the percentages of Blacks and Hispanics for both years. Generally, however, the percentage of Other students meeting standards was less than for White students for both years. Relative to White students, in fact, the percentage differences were generally larger in 1981/82 than in 1980/81 although never exceeding 8% in 1981/82.

The preceding observations indicate, in short, that generally Black and Hispanic students did not do as well in 1981/82 as they did in 1980/81, and that in some instances more than one out of every four Black or Hispanic students is not meeting local minimum standards. Compounding this disturbing situation are the facts drawn from Table 10 (page 23) which indicate that on the secondary level follow-up testing between 41% and 53% of Black and Hispanic students are not meeting standards in any basic skill area when tested for the second time.

TABLE # 25

ALL GRADE LEVELS AND SKILLS

Percentage of Students Achieving Minimum Standards by Sex and Race/Ethnicity

	1980-81			1981-82		
	READING	WRITING	MATHEMATICS	READING	WRITING	MATHEMATICS
EARLY ELEMENTARY						
Male	91	86	93	91	89	92
Female	94	92	94	93	94	93
Black	78	85	85	73	86	83
Hispanic	77	82	87	75	82	85
White	94	89	94	94	92	94
Other	90	90	95	86	91	94
LATER ELEMENTARY						
Male	90	86	88	90	88	88
Female	92	93	91	92	94	91
Black	79	80	74	76	83	73
Hispanic	71	79	77	71	82	80
White	92	90	90	92	92	91
Other	91	89	93	92	89	93
SECONDARY						
Male	87	81	88	87	83	88
Female	91	92	89	90	93	89
Black	74	79	77	69	77	71
Hispanic	68	76	70	68	75	71
White	90	87	90	90	89	90
Other	87	86	78	82	87	88

C. Comparisons of Students Not Achieving Minimum Standards and Exempt/ Not Evaluated by Race/Ethnicity for 1981/82

Table 26 on page 49 displays the percentages of students, by race/ethnicity reported, not meeting standards, and exempt/ not evaluated across all grade levels and skills during 1981/82. The following observations are based on the percentages found in this table:

1. Across all skills and grade levels, between 88% and 91% of all students reported were White and 10% and 12% were in minority categories.

2. Compared to their proportions of those reported for basic skills at all grade levels, a significantly higher proportion of Black and Hispanic students failed to meet minimum standards than did White or Other students. While these Black and Hispanic students together represented between 9% and 10% of those reported, they represented between 14% and 28% of those not meeting standards. White students, on the other hand, while representing between 88% and 91% of those reported, represented between 70% and 85% of those not meeting standards.

3. Compared to their proportions of those reported for basic skills at all grade levels, a significantly higher proportion of Black, Hispanic and Other students were either exempted or not evaluated for basic skills achievement than were White students. While these Black, Hispanic and Other students together represented between 10% and 12% of those reported, they represented between 30% and 47% of those either exempted or not evaluated. White students, on the other hand, while representing between 88% and 91% of those reported, represented between 53% and 68% of those either exempted or not evaluated.

The preceding observations indicate, in short, that Black and Hispanic students represent a disproportionate percentage of those not meeting standards as well as those exempted or not evaluated. When these observations are combined with earlier observations an unhappy picture emerges of excessive numbers of Black and Hispanic students not meeting basic skills standards in first or second testing, being exempted from testing, or simply not being available for testing.

D. Comparisons of Statewide Performance by Kind of Community (KOC) for 1980/81 and 1981/82

In addition to analyzing the data on the percentage of students statewide who achieved minimum standards by the categories used throughout this report, the results from individual districts were grouped by four classifications of cities and towns referred to as Kind of Community (KOC). This KOC classification assigns each school district in Massachusetts into one of four groupings organized on the basis of family income level, size, degree of industrialization, type of community (urban, suburban, rural), and income. The four KOC's are as follows:

KOC 1: *Big Cities* generally refer to communities designated as central cities according to the 1970 United States Census. Examples of Massachusetts big cities include Brockton, Haverhill, Holyoke, Lawrence, Worcester.

TABLE # 26

ALL GRADE LEVELS AND SKILLS

Percentage Comparisons of Students Not Achieving Minimum Standards and Exempted/Not Evaluated by Race/Ethnicity of Students

READING

Race/Ethnic Category	Early Elementary			Later Elementary			Secondary		
	% of Total Reported	% of Students Not Meeting Standards	% of Students Exempted/Not Evaluated	%of Total Reported	% of Students Not Meeting Standards	% of Students Exempted/Not Evaluated	% of Total Reported	% of Students Not Meeting Standards	% of Students Exempted/Not Evaluated
Black	6	19	15	6	14	15	6	14	14
Hispanic	4	9	24	4	8	18	3	7	13
White	88	70	55	89	77	60	90	77	68
Other	2	2	6	1	1	5	1	2	5

WRITING

Black	6	10	14	6	10	17	6	9	17
Hispanic	4	6	23	4	5	17	3	5	13
White	88	83	57	90	84	61	89	85	64
Other	2	1	5	1	1	5	1	1	5

MATHEMATICS

Black	6	13	17	6	14	16	6	13	13
Hispanic	4	6	25	4	5	17	3	6	15
White	88	81	53	89	80	63	91	80	68
Other	2	1	5	1	1	5	1	1	4

KOC 2: *Industrial Suburbs* generally include three types of communities: suburbs in the inner Boston circle with below average family income and with more than 20% commercial and 7% industrial land use; suburbs in the outer Boston circle with below average family income and with more than 20% commercial land use; and suburbs of central cities other than Boston with below average family income and with more than 20% commercial and 7% industrial land use. Examples of industrial suburbs are Cambridge, Chelsea, Medford, Quincy, Peabody, Waltham, Lee and Monson.

KOC 3: *Residential Suburbs* generally fall into three categories: suburbs of Boston (not industrial suburbs) with average family incomes up to $16,000; suburbs of Boston (not industrial suburbs) with average family incomes over $16,000; and suburbs of central cities other than Boston with above average family incomes. Examples include Arlington, Braintree, Framingham, Scituate, Walpole, Andover, Dover, Milton, Newton, Chelmsford, Shrewsbury, Wilbraham.

KOC 4: *Small Towns and Other Communities* generally include the following types: resort towns in the Cape Cod area; resort towns in the Berkshire area; suburbs of cities other than Boston (not industrial suburbs) with less than average family income; towns with below average family income and industrial/commercial land use; towns with below average family income that are non-industrial, non-commercial and non-resort areas; and communities with a population of less than 2,500 inhabitants but not resort areas. Examples of small towns and other communities include Barnstable, Chatham, Yarmouth, Stockbridge, Bridgewater, Hadley, Oxford, Stoughton, Newburyport, Taunton, Ayer, Kingston, Orange, Webster, Ashfield, Dunstable, Plympton.

Table 27 on page 51 displays the percentage of students achieving and not achieving minimum standards by KOC for each grade level and skill for 1980/81 and 1981/82. The following observations are based on the percentages found in this table:

1. Across all grade levels and skills, the percentages of students achieving minimum standards were highest in most comparisons in KOC 3 (Residential suburbs) and lowest in all comparisons in KOC 1 (Big Cities) for both 1980/81 and 1981/82. The differences between these two types of communities were largest in reading at all levels and in most cases the differences at all levels were larger in 1981/82 than in 1980/81. In addition, the differences in student achievement between big cities and residential suburbs were statistically significant.

2. Between 1980/81 and 1981/82, the percentages of students achieving minimum standards increased the most in both KOC 2 (Industrial Suburbs) and KOC 4 (Small Towns and Other Communities) in all levels and skills areas. It decreased the most in KOC 1 (Big Cities)

TABLE # 27

Percentage of Students Achieving Minimum Standards By Kind of Community

EARLY ELEMENTARY (K-3) - READING, WRITING AND MATHEMATICS

Skill	KOC 1		KOC 2		KOC 3		KOC 4	
	% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards	
	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82
Reading	86	82	92	96	96	96	94	94
Writing	84	88	91	92	92	92	88	92
Mathematics	90	86	94	97	95	95	93	93

LATER ELEMENTARY (4-6) - READING, WRITING AND MATHEMATICS

Skill	KOC 1		KOC 2		KOC 3		KOC 4	
	% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards	
	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82
Reading	86	81	89	92	94	95	91	92
Writing	81	87	92	92	93	94	89	91
Mathematics	83	80	90	94	93	93	89	91

SECONDARY (7-12) - READING, WRITING, AND MATHEMATICS

Skill	KOC 1		KOC 2		KOC 3		KOC 4	
	% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards		% of Students Achieving Minimum Standards	
	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82	1980-81	1981-82
Reading	84	81	87	91	92	92	88	89
Writing	84	84	83	87	88	90	83	87
Mathematics	85	82	88	90	93	92	88	88

The preceding observations indicate, in short, that the patterns of performance by kind of community during the two years were fairly similar but that the gap between the percentages of students meeting minimum standards in large cities and those in other kinds of communities has widened slightly.

E. Comparisons on Test Usage for 1980/81 and 1981/82

An examination of tests used at both elementary levels and the secondary level during 1980/81 and 1981/82 leads to the following observations based on percentages found in tables displayed in both reports:

1. At both elementary levels about 75% of districts used locally developed writing tests; 25% used locally developed mathematics test and 17% used locally developed reading tests in each of the two years. The remainder used commercial tests.

2. At the secondary level about 82% of districts used state tests in mathematics; 79% used state tests in reading and 78% used state tests in writing during each of the two years. In reading and mathematics between 16% and 20% of districts used commercial tests during the two year period and 1% and 2% used locally developed tests. In writing between 21% and 22% of districts used locally developed writing tests at the secondary level.

F. Comparisons on Minimum Standards for 1980/81 and 1981/82

Table 28 on page 53 displays the statewide range of standards at all levels for reading and mathematics, established by districts during both 1980/81 and 1981/82. The first column indicates the range of standards in terms of percentage correct and the remaining columns show the percentage of districts setting standards in these ranges. The following observations are based on the percentages found in this table:

1. Most decile shifts between 1980/81 and 1981/82 are 2% or less. The largest single shift is 7% (a shift from 22% to 29% in the standard range of 50-59 in later elementary reading).

2. During both years, in reading and mathematics, a larger percentage of districts set their standards at 70% correct or more at the early and later elementary levels than at the secondary level. On the other hand, at the other extreme, a larger percentage of districts set their standards at 50% correct or less at the early and later elementary levels than at the secondary level. In short, there is a wider variation in standards at the elementary levels than at the secondary level.

The relatively minor shifts in standards between 1980/81 and 1981/82 is a product of districts changing their standards between the two years. Shown below are the number of districts that raised and lowered their standards during 1981/82 in reading and mathematics. Two things should be noted in examining this chart:

TABLE # 28

ALL GRADE LEVELS - READING AND MATHEMATICS

Statewide Range of Standards by Percentage of Districts for 1980/81 and 1981/82

	EARLY ELEMENTARY		LATER ELEMENTARY		SECONDARY	
	% of Districts 1980/81	% of Districts 1981/82	% of Districts 1980/81	% of Districts 1981/82	% of Districts 1980/81	% of Districts 1981/82
READING (Range of Standards- % Distribution)						
90-100	1	1	1	-	-	-
80-89	12	10	10	10	2	2
70-79	14	16	10	9	15	15
60-69	17	15	15	14	38	41
50-59	22	27	22	29	29	27
40-49	22	20	28	26	8	11
30-39	10	8	14	12	5	3
Below 30	1	4	1	1	2	-
MATHEMATICS (Range of Standards- % Distribution)						
90-100	-	-	-	-	-	-
80-89	11	11	6	5	2	2
70-79	16	16	14	13	7	6
60-69	17	14	17	18	29	31
50-59	20	21	18	20	37	35
40-49	19	20	22	23	15	16
30-39	15	15	19	17	10	9
Below 30	2	2	4	5	-	-

One, this information is only for districts using the same test during the two year period (i.e. some districts changed both their tests and standards so it was impossible to judge whether the new standards represented a higher or lower standard). Second, to lessen the possibility of calculation errors and to reflect significant standard changes, only districts that raised or lowered their standards by 5% or more have been included.

ALL GRADE LEVELS - READING AND MATHEMATICS

Number of Districts Raising and Lowering Standards Between 1980/81 and 1981/82

Grade Levels	Reading		Mathematics	
	# of Districts Lowering Standards	# of Districts Raising Standards	# of Districts Lowering Standards	# of Districts Raising Standards
Early Elementary	23	29	25	24
Later Elementary	24	27	22	21
Secondary	6	11	6	13

As can be seen most of the changes were made at the elementary levels with (except for early elementary reading) almost as many districts raising standards as lowering standards. At the secondary level, about twice as many districts raised standards as lowered them in each skill area.

The number of districts making changes in their standards (as well as the size of the changes) during the two year period had, except in early elementary reading, relatively little impact on the median standards. However, elementary standards were slightly lower and secondary standards slightly higher in 1981/82 than they were in 1980/81 as is illustrated in the chart below:

ALL GRADE LEVELS - READING AND MATHEMATICS

Median Standards Established by Districts for 1980/81 and 1981/82

Grade Levels	Reading		Mathematics	
	1980/81	1981/82	1980/81	1981/82
Early Elementary	57	53	56	55
Later Elementary	54	53	53	51
Secondary	59	60	56	58

The percentage of students achieving minimum standards within each of the standard ranges (the decile ranges shown in Table 28) was examined to see if there were any relationship between the level of standards set by school districts and the percentage of students meeting these standards. For both 1980/81 and 1981/82 there appeared to be little, if any, relationship between these two factors at the elementary levels. In other words, the percentage of students meeting standards at any one level had generally little to do with whether the standard was high or low.

At the secondary level there appeared to be a slight but direct relationship during both years (i.e. the higher the standards the lower the percentage of students meeting standards; the lower the standards the higher the percentage of students meeting standards). This relationship is probably related to the fact that about 80% of schools used state tests at the secondary level while at the elementary levels no one test instrument predominated.

The observations on standards in this section indicate some minor changes in the standards established by school districts. There is no data to explain why districts set their standards as they did. From a survey conducted in October, 1982, in a random sample of 80 school systems, it was noted that the majority of central office administrators believed that their standards were not too low. In response to the same question, however, the majority of teachers and building administrators simply had no opinion. Nevertheless, various reasons have been offered to explain the perceived low standards established in some districts:

- some districts facing severe fiscal restraints may have opted for standards that would not result in facing a "remediation" problem that could not be handled.
- the nature of many commercial tests (as noted in an earlier section of this report) will make performance at or near grade level appear to be a low percentage passing score.
- because of comparisons initiated by the media and others, some districts felt forced to "look good" which may have meant using a relatively low standard.
- some districts interpreted a fair basic skills standard as a borderline between a passing and failing student which led them to look at the test performance differences between "F" and "D" students.
- many districts, desiring to avoid the appearance of setting standards arbitrarily, have involved teachers and others in examining all test items and, subsequently, making judgments about whether an "incompetent" student should or should not be able to answer these items correctly. Given different perceptions of "incompetent," the results will often lead to extreme variations in standards.

G. Comparisons Between Fiscal Ability and Student Performance

Previous comparisons in this section of the report have examined student performance by race/ethnicity and by kind of community in an attempt to understand relationships that may help explain the findings. As a further aid in seeking understanding an examination of the relationship between the wealth or fiscal ability of towns and cities and how well students achieved minimum standards was undertaken.

To do this all cities and towns were, first, placed into one quartile or another according to their fiscal ability. Fiscal ability was derived from a formula based equally on equalized property valuations per capita and income per capita. Valuations were for 1980; the income index was based on the 1977 United States Census Estimate. Second, for each level and each skill, the percentage of students meeting basic skills standards in each quartile was computed.

The results are displayed in Table 29 on page 57. The following observations are based on the percentages found in this table:

1. Across all grade levels and skills, for most of the comparisons, the percentage of students meeting minimum standards was highest in the highest quartile (highest in fiscal ability) communities. In all comparisons, the percentage of students meeting minimum standards was lowest in the lowest quartile (lowest in fiscal ability) communities.

2. Statistical tests to determine if the observed differences between and among quartiles were most likely true or simply chance differences were conducted. While the results showed that there were no statistically significant differences between adjoining quartiles (these were most likely chance differences), there was a statistically significant difference between the percentages of students meeting minimum standards in the lowest quartile and the highest quartile across all levels and skills. In short, the extremes of community wealth were significantly related to student performance.

TABLE # 29
ALL GRADE LEVELS AND SKILLS
Percentage of Students Achieving Minimum Standards by Fiscal Ability

EARLY ELEMENTARY (K-3) - READING, WRITING, AND MATHEMATICS

SKILL	LOWEST QUARTILE	SECOND QUARTILE	THIRD QUARTILE	HIGHEST QUARTILE
READING	92.6	96.1	94.5	95.3
WRITING	90.5	92.9	91.6	93.1
MATHEMATICS	92.5	94.9	94.4	95.1

LATER ELEMENTARY (4-6) - READING, WRITING, AND MATHEMATICS

SKILL	LOWEST QUARTILE	SECOND QUARTILE	THIRD QUARTILE	HIGHEST QUARTILE
READING	90.3	93.0	94.0	95.0
WRITING	89.7	92.9	92.0	92.6
MATHEMATICS	90.3	92.7	93.1	93.8

SECONDARY (7-12) - READING, WRITING, AND MATHEMATICS

SKILL	LOWEST QUARTILE	SECOND QUARTILE	THIRD QUARTILE	HIGHEST QUARTILE
READING	87.0	90.9	90.1	91.0
WRITING	86.1	88.5	87.2	90.7
MATHEMATICS	85.6	90.4	90.5	90.5

The differences in student performance noted between the wealthiest and poorest communities may, in reality, be underestimated. That this could be so is based on two facts. One, the restricted range of student performance observed in Table 29 (less than an 11% difference between the lowest and highest percentages of students achieving minimum standards) lessens the possibility of finding significant differences between and among quartiles. Second, student performance differences that are shown in the table are not based on uniform tests, standards or grade levels. If they were, in all likelihood there would be a wider spread in student performance and, therefore, a greater probability of even more significant differences between and among all quartiles.

A related and similar examination of the relationship between per-pupil expenditures for instruction and how well students achieved minimum standards was also undertaken. The results did not show any significant relationships between or among any quartiles. The lack of such relationships might, in part, be explained by the following:

- per-pupil expenditure data is too gross a measure. It fails to show how funds are allocated or actually used.

- related to this, communities with identical expenditures will often have very different needs and types of students such that instructional funds will have to be used in quite different ways (Boston and Weston, for example, are both in the highest per-pupil expenditure quartile which reflects the fact that community wealth and per-pupil expenditures for instruction are not highly correlated).

- as with the fiscal ability data discussed above, the fact that there is less than a 9% difference between the lowest and highest percentages of students achieving minimum standards across all expenditure quartiles lessens the possibility of finding significant differences between and among quartiles. As also noted, student performance differences are not based on uniform tests, standards or grade levels. If they were, in all likelihood there would be a wider spread in student performance and, therefore, a greater probability of finding significant differences between and among expenditure quartiles.

BASIC SKILLS IMPROVEMENT POLICY

Major Department Publications

General	
Basic Skills Improvement Policy and Regulations	January, 1979
A Teacher's Guide to Basic Skills Improvement	October, 1980
Measure for Measure - Evaluating Student Writing	December, 1980
1980/81 Statewide Summary of Student Achievement of Minimum Standards in the Basic Skills of Reading, Writing and Mathematics	December, 1981
Assessment Publications	
Massachusetts Assessment of Basic Skills - 1978/79 (Mathematics, Reading, Writing)	September, 1979
Massachusetts Assessment of Basic Skills - 1979/80 (Listening, Speaking)	November, 1980
Implementation Guides	
Assessing Basic Skills Achievement - Guide #1 (Revised Edition)	May, 1980
Writing Assessment Manual - Guide #2 (Revised Edition)	March, 1981
Supplement to Writing Assessment Manual	January, 1982
Standards Setting Manual - Guide #3 (Revised Edition)	March, 1981
Forms and Procedures - Guide #4	December, 1979
Local Test Development Manual - Guide #5	November, 1981
Interpreting and Using Commercial Achievment Test Results (Supplement)	May, 1982
Evaluation Instruments and Information	
Massachusetts Test of Basic Skills (Mathematics, Reading, Writing, Listening	1980, 1981, 1982
Secondary Level Approved Commercial Tests (Mathematics, Reading, Listening)	December, 1980
Elementary Level Commercially Available Listening Tests	October, 1980
Topic Ideas for Assessing Writing at Elementary Level	January, 1981
Criteria for Approval of Commercial and Local Basic Skills Tests	September, 1981
Printing/Scoring Services for State Basic Skills Tests	September, 1982